

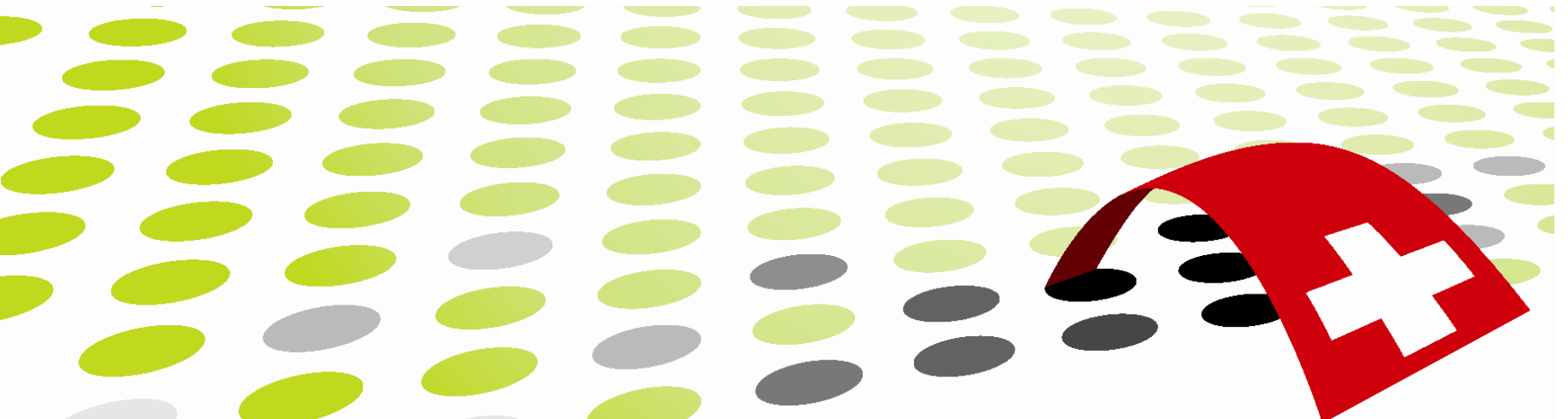
# Nano-Tera.ch

## Engineering Complex Systems

*Giovanni De Micheli, Program Leader*

*Martin Rajman, Executive Director*

*Patrick Mayor, Scientific Coordinator*



# Nano-Tera.ch

**A very successful Swiss research program  
funding large collaborative multi-discipline projects  
aiming at the engineering of complex systems  
for applications in the domains of Health  
and the Environment**




# Mission

**Research, Design & Engineering of complex **tera-scale** systems  
using **nano-scale** devices and technologies**

**Foster research and crossbreeding of technologies**

**Main application domains are **Health** and **Environment**,  
with **Energy** and **Security** as transversal support areas**

- 
- Develop new markets
  - Improve living standards
  - Better the quality of health and environment
  - Foster a vision of engineering with social objectives
  - Promote related educational programs



# Phase I: Key figures

- **77** Projects  
(19 RTD – 8 RTD add-on – 15 NTF – 29 ED – 6 SSSTC)
- **36** Research institutions (involved with PIs or CoPIs)  
(**31** Swiss + **5** Chinese institutions)
- **155** Research groups
- **30** Industrial partners
- **~700** Researchers
- **~180** Doctoral theses supported
- **24** Patent applications filed
- **61.8 MCHF** Total Nano-Tera.ch budget (+ matching)
  - Including HES support

# Industry involvement: Phase I

- Most RTD projects receive support from various industrial partners.

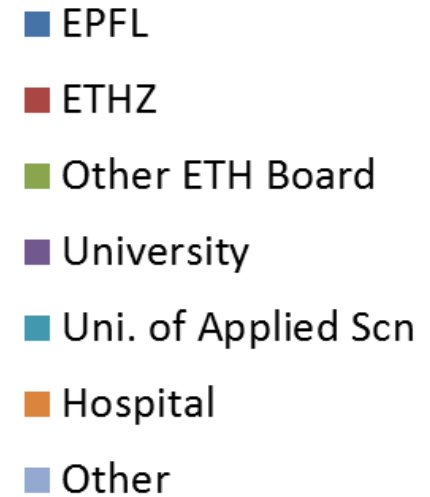
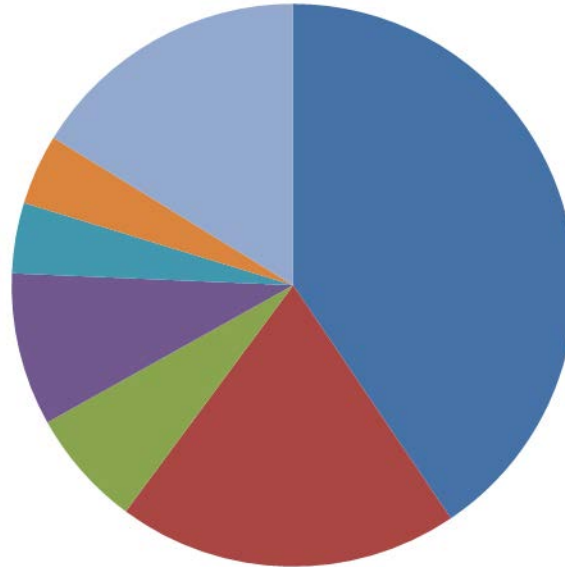
**30** industrial partners involved in Phase I RTD & RTD add-on projects

	Number of projects	Number of industrial partners	Contributions (CHF)
RTD 2009	10	17	2'375'986
RTD 2010	9	8	3'342'201
RTD add-on	8	5	931'387
	<b>27</b>	<b>30</b>	<b>6'649'574</b>

# Partner distribution by institution

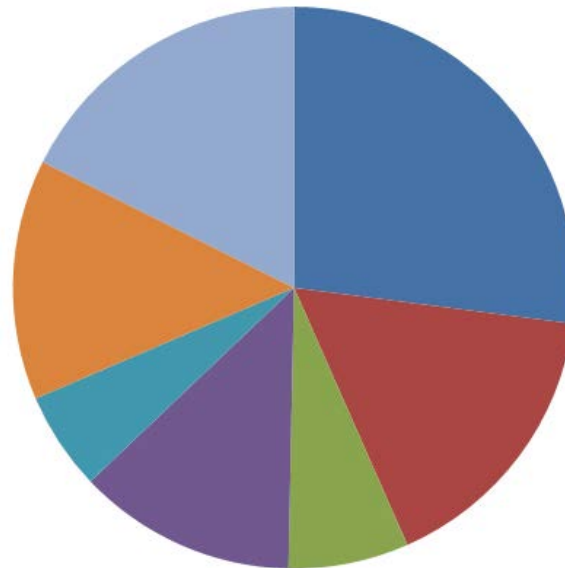
## Phase I

(Projects  
2009-2013)



## Phase II

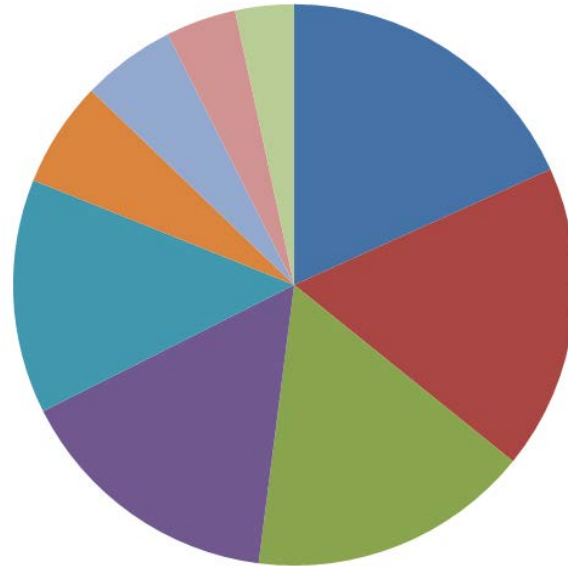
(Projects  
2013-2017)



# Partner distribution by discipline

## Phase I

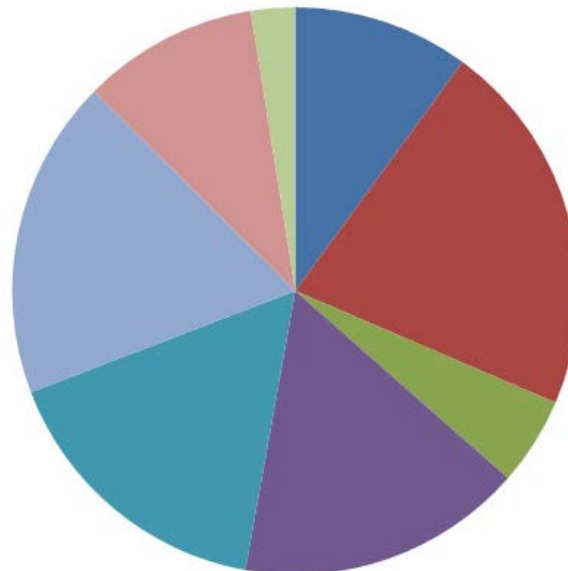
(Projects  
2009-2013)



- Electronic & Optical Systems
- Bioengineering & Life Sciences
- Microengineering
- Information & Communication Systems
- Electrical Engineering
- Fundamental Sciences
- Medicine
- Energy
- Environment

## Phase II

(Projects  
2013-2017)



# 31 Swiss institutions: Phase I


**Part of ETH-Board**



ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE



Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich

PAUL SCHERRER INSTITUT

**Part of OPET (BBT)**



Haute Ecole Spécialisée de Suisse occidentale  
Fachhochschule Westschweiz  
University of Applied Sciences Western Switzerland



Fachhochschule Nordwestschweiz



FHO Fachhochschule Ostschweiz

**Part of SUK / CUS**



Universität Zürich



UNIVERSITÄT BERN



UNIVERSITÉ DE GENÈVE



Université de Neuchâtel



UNIL | Université de Lausanne



UNI BASEL



University of Applied Sciences and Arts of Southern Switzerland



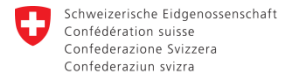
Università della Svizzera italiana



UNIVERSITAS FRIBURGENSIS  
UNIVERSITÉ DE FRIBOURG SUISSE  
UNIVERSITÄT FREIBURG SCHWEIZ



UniversitätsSpital Zürich



Swiss Confederation

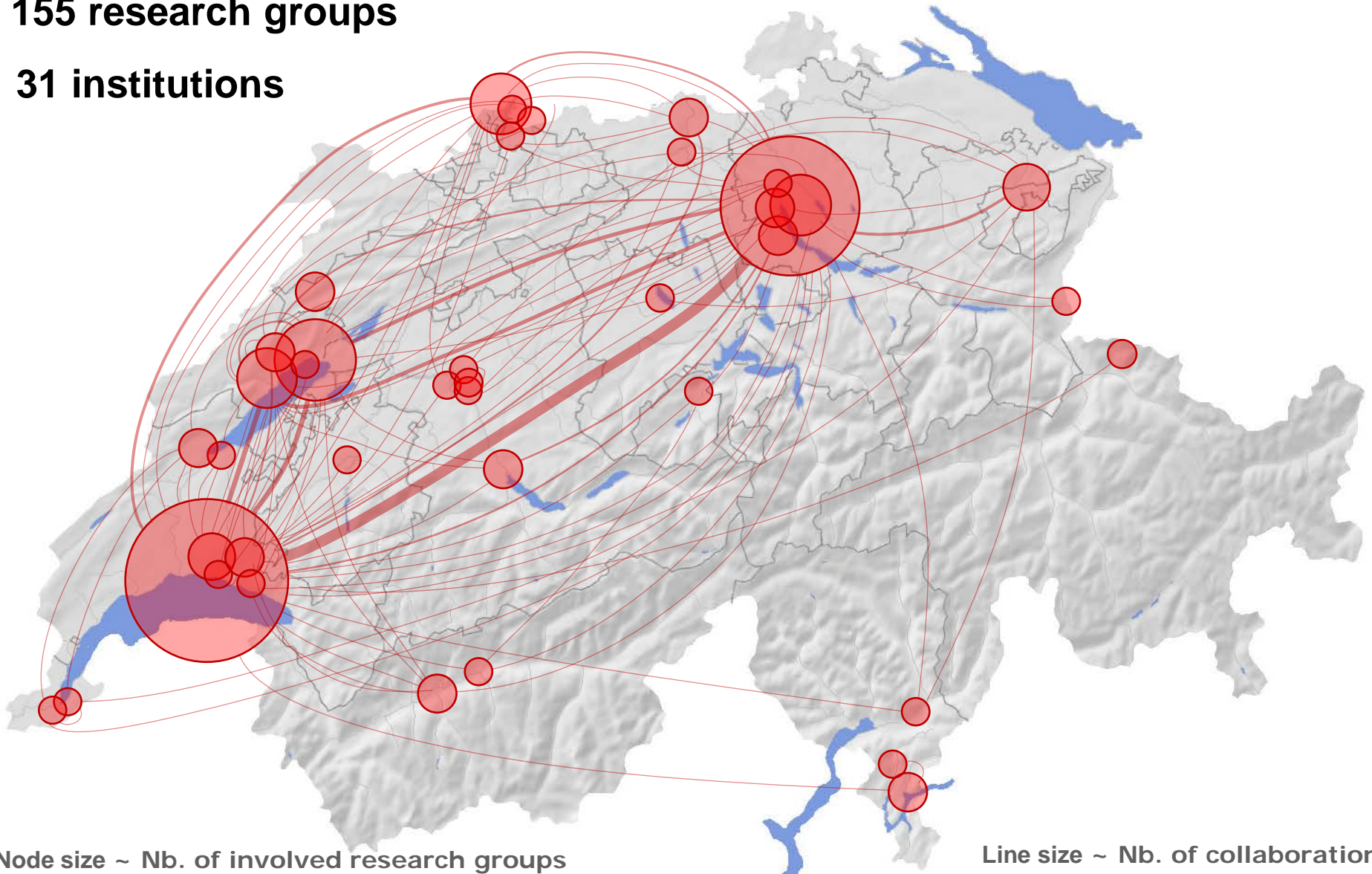
Federal Office for the Environment FOEN



# Distribution of research groups: Phase I

155 research groups

31 institutions



Node size ~ Nb. of involved research groups

Line size ~ Nb. of collaborations

# Looking forward



# Phase II: Key figures

- **43** Projects selected (including 25 RTD projects)
- **37** Research institutions (involved with PIs or CoPIs)
- **189** Research groups
- **~120** Doctoral theses supported
- Most RTD projects receive support from various industrial partners and hospital end-users

	Number of projects	Number of industrial partners	Number of hospital partners	Contributions (CHF)
RTD Call 2011	6	9	6	2'326'260
RTD Call 2012	12	10	6	4'266'108
RTD Call 2013	7	15	1	1'621'150
	<b>25</b>	<b>34</b>	<b>13</b>	<b>8'213'518</b>

# 37 Swiss institutions: Phase II

**Part of ETH-Board**



ÉCOLE POLYTECHNIQUE FÉDÉRALE DE LAUSANNE



Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich




aquatic research

**Part of OPET (BBT)**



Haute Ecole Spécialisée de Suisse occidentale  
Fachhochschule Westschweiz  
University of Applied Sciences Western Switzerland



Berner Fachhochschule



Fachhochschule Nordwestschweiz

**Hospitals**




UniversitätsSpital Zürich



UNIVERSITÄTSSPITAL BERN  
HOPITAL UNIVERSITAIRE DE BERNE  
BERN UNIVERSITY HOSPITAL



spitäler schaffhausen



UniversitätsSpital Basel



KINDERSPITAL ZÜRICH  
Universitäts-Kinderkliniken · Eleonorenstiftung

**Part of SUK / CUS**



Universität Zürich



UNIVERSITÉ DE GENÈVE



Université de Neuchâtel



UNIVERSITÄT BERN



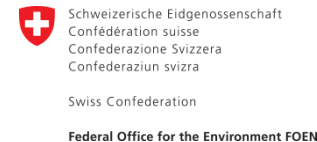
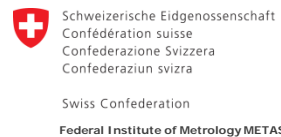
UNI BASEL



UNIL | Université de Lausanne



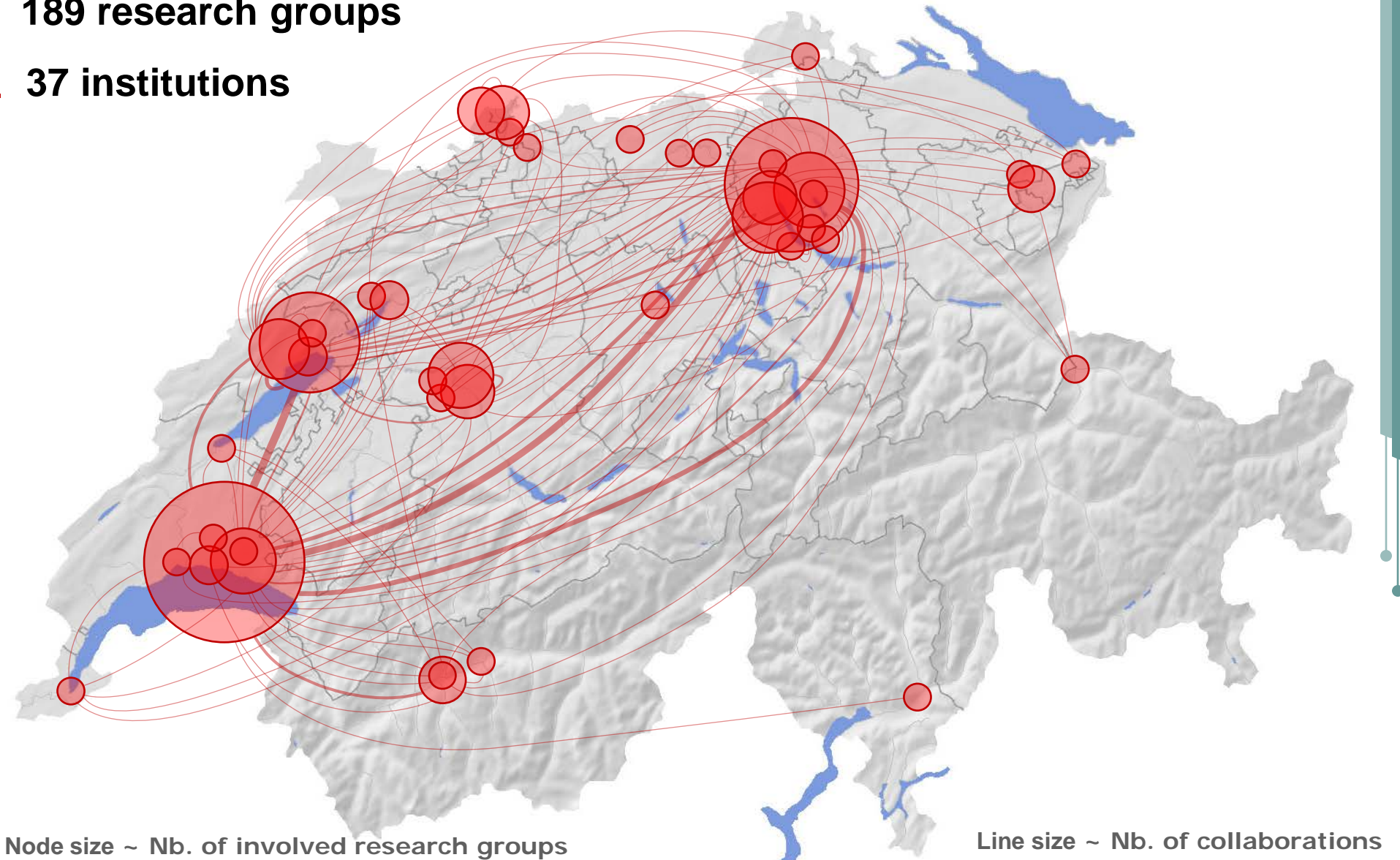
Universität St.Gallen



# Distribution of research groups: Phase II

189 research groups

37 institutions



Node size ~ Nb. of involved research groups

Line size ~ Nb. of collaborations

# Mark your calendars!

Nano-Tera Annual Meeting 2014:

**May 20, 2014**

**Swiss Convention Center, EPFL**





*Thanks for your attention !*

➤ [www.nano-tera.ch](http://www.nano-tera.ch)